DEPARTMENT of ENVIRONMENTAL SERVICES
Water Division - Watershed Management Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake:	YORK POND	Lake Area (ha):	8.50
Town:	BERLIN	Maximum depth (m):	4.4
County:	Coos	Mean depth (m):	2.8
River Basin:	Connecticut	Volume (m^3):	234500
Latitude:	44°30'12" N	Relative depth:	1.4
Longitude:	71°20'21" W	Shore configuration:	1.26
Elevation (ft):	1480	Areal water load (m/yr):	6.96
Shore length (m):	1300	Flushing rate (yr^{-1}):	2.50
Watershed area (ha):	90.4	P retention coeff.:	0.60
% watershed ponded:	0.0	Lake type:	artificial

BIOLOGICAL:		18 January 2001	6 September 2000
DOM. PHYTOPLANKTON (% TOTAL)	#1	ASTERIONELLA 40%	ANABAENA 85%
	#2	MELOSIRA 35%	MALLOMONAS 8%
	#3		
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			25.26
DOM. ZOOPLANKTON (% TOTAL)	#1	KELLICOTTIA 37%	KELLICOTTIA 67%
	#2	FLAGELLATE SPP. 35%	POLYARTHRA 8%
	#3		BOSMINA 8%
ROTIFERS/LITER		148	863
MICROCRUSTACEA/LITER		45	223
ZOOPLANKTON ABUNDANCE (#/L)		296	1086
VASCULAR PLANT ABUNDANCE			Sparse
SECCHI DISK TRANSPARENCY (m)			1.1
BOTTOM DISSOLVED OXYGEN (mg/L)		2.3	0.6
BACTERIA (E. coli, #/100 ml)	#1		< 30
	#2		< 30
	#3		

SUMMER THERMAL STRATIFICATION:

not stratified

Depth of thermocline (m): None
Hypolimnion volume (m^3) : None
Anoxic volume (m^3) : 6900

CHEMICAL:

Lake: YORK POND
Town: BERLIN

	18 January 2001		6 September 2000		
DEPTH (m)	1.0	3.0	1.5		3.0
pH (units)	6.2	6.3	6.6		6.6
A.N.C. (Alkalinity)	4.2	4.8	6.0		5.9
NITRATE NITROGEN	0.18	0.13	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.40	0.60	0.66		0.88
TOTAL PHOSPHORUS	0.025	0.029	0.029		0.040
CONDUCTIVITY (µmhos/cm)	24.0	24.1	23.0		23.3
APPARENT COLOR (cpu)	15	23	33		33
MAGNESIUM			0.38		
CALCIUM			2.4		
SODIUM			1.2		
POTASSIUM			< 0.40		
CHLORIDE	< 2	< 2	< 2		< 2
SULFATE	4	3	< 5		< 5
TN : TP	23	25	23		22
CALCITE SATURATION INDEX					

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 2000

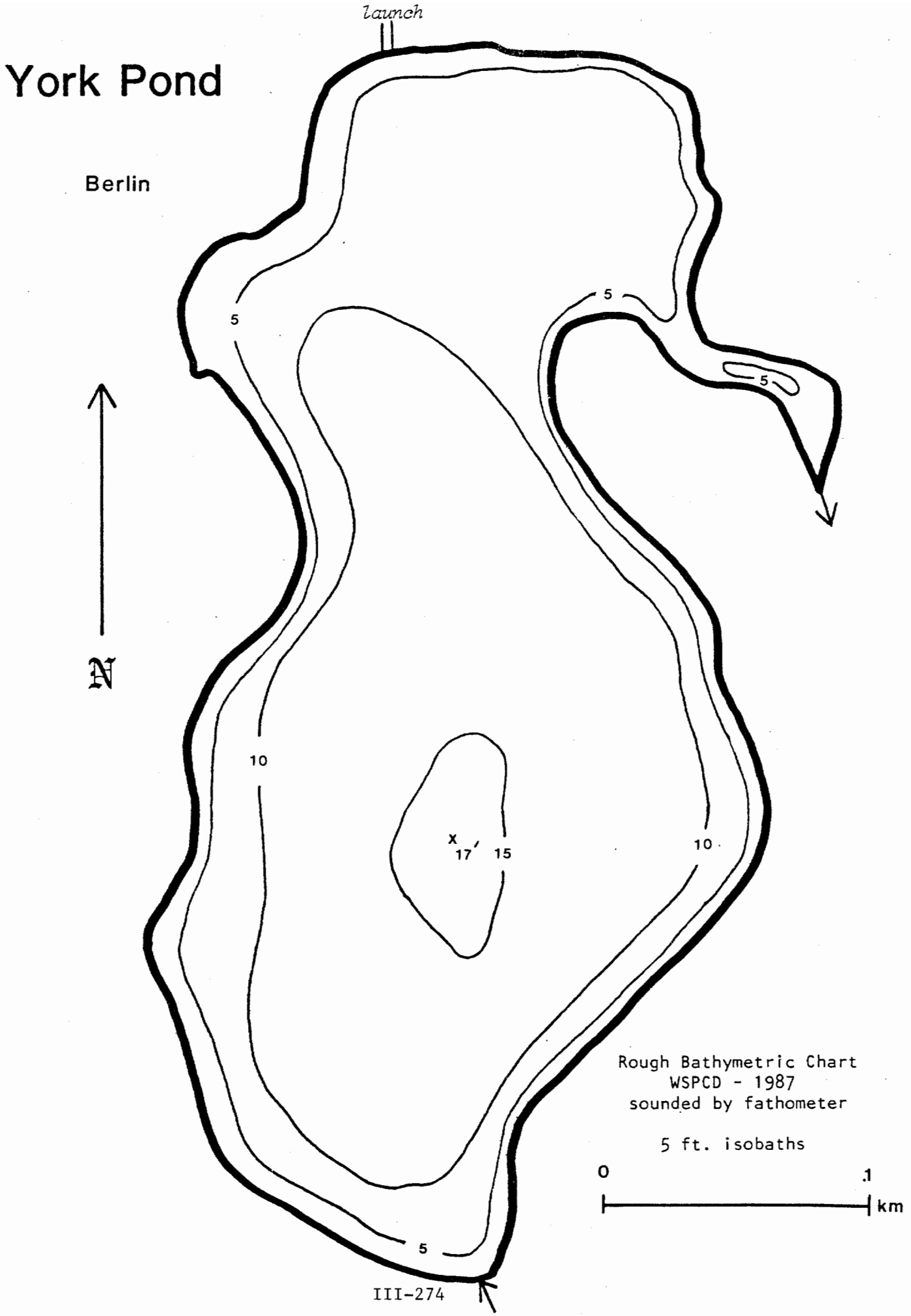
D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	4	0	5	9	Meso.

COMMENTS:

1. Previously surveyed in 1987. It was re-surveyed to verify its impaired water status due to high algal growth. Algal biomass (as measured by chlorophyll) was high (25 ug/L) but less than in 1986 (63 ug/L).

2. The high algal populations are due to high phosphorus levels resulting from water discharged from the raceways at the Berlin fish Hatchery. The total phosphorus value of a sample collected from the inlet brook below the hatchery was 0.078 mg/L. Suspended solids in the inlet stream were observable with the naked eye.

3. The summer net phytoplankton was dominated (85%) by the blue-green alga *Anabaena* – typical of high nutrient (phosphorus) ponds. Zooplankton were also very abundant.


launch
York Pond
Berlin
N
5
5
5
10
10
X
17'
15
5
Rough Bathymetric Chart
WSPCD - 1987
sounded by fathometer
5 ft. isobaths
0
.1
km

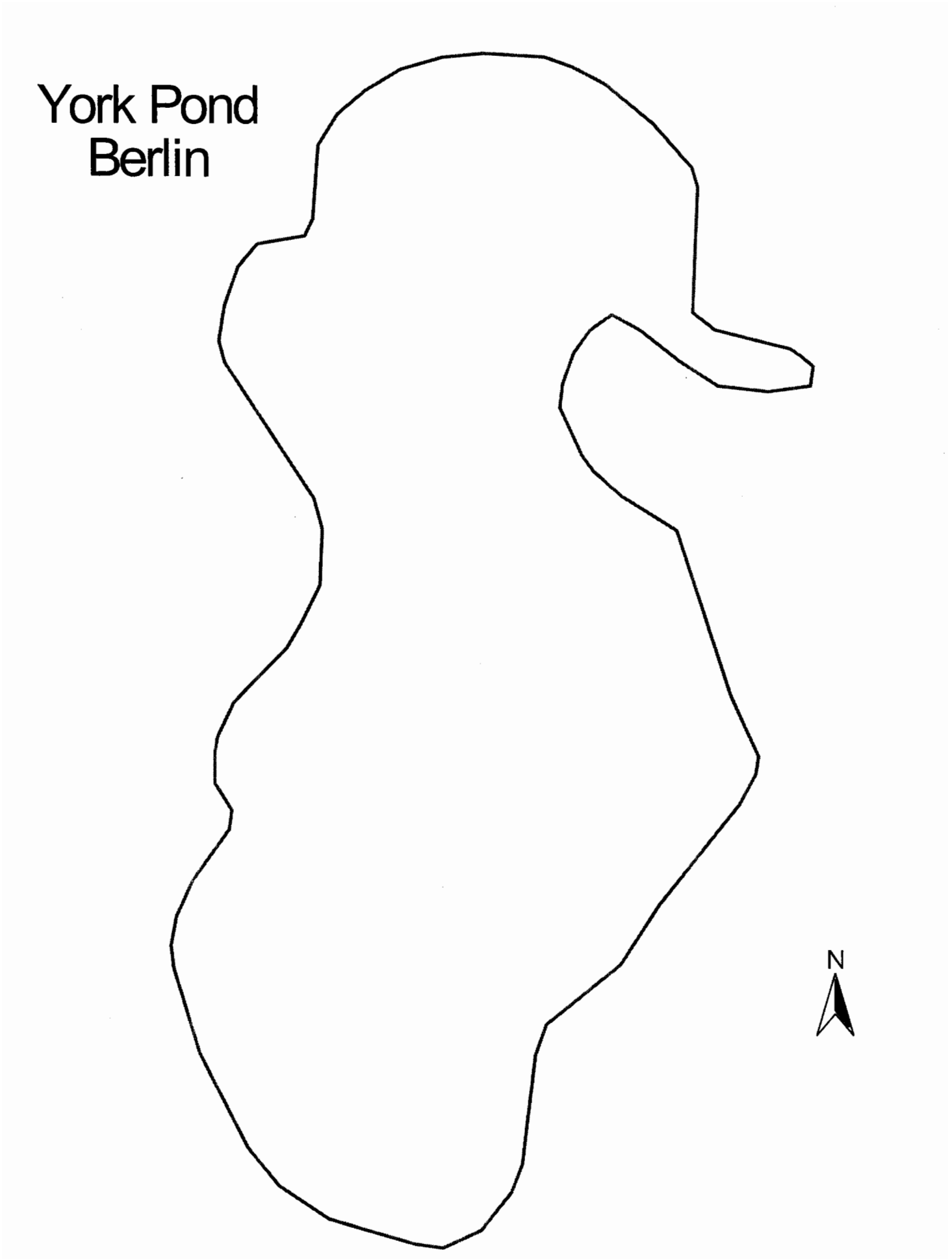
FIELD DATA SHEET

LAKE: YORK POND TOWN: BERLIN
DATE: 09/06/2000 WEATHER: Sunny, Cool

	DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
	0.1	17.4	8.5	87 %
	1.0	16.4	8.8	88 %
	2.0	16.3	8.6	86 %
	3.0	15.7	5.6	55 %
	4.0	14.5	0.6	6 %

SECCHI DISK (m): 1.1 COMMENTS:
BOTTOM DEPTH (m): 4.4
TIME: 1220

*Dissolved oxygen values are in mg/L


York Pond
Berlin
N
0
0.04
0.08
0.12
0.16
0.2 Kilometers

AQUATIC PLANT SURVEY

LAKE: YORK POND TOWN: BERLIN DATE: 09/06/2000

Key	PLANT NAME		ABUNDANCE
	GENERIC	COMMON	

OVERALL ABUNDANCE: Sparse

GENERAL OBSERVATIONS:

1. No rooted plants observed in the pond. The high algal populations probably shaded out the rooted plants.